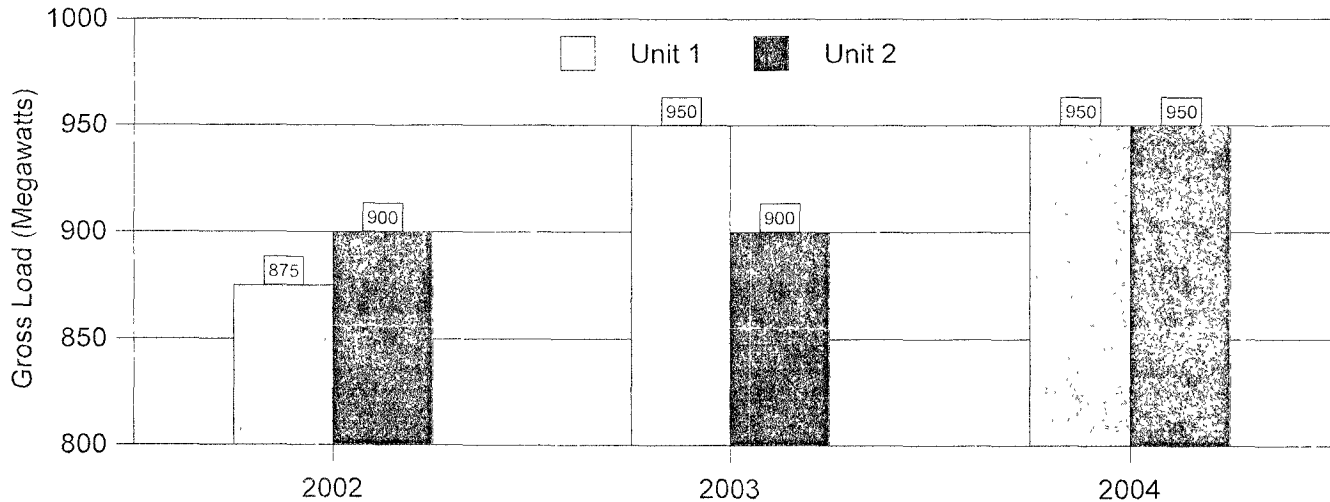


Internal Business Process

**Objective:** Complete Unit 2 Uprate

**Initiative:** Installation of all Unit 2 equipment required for complete uprate to 950 MW

## Units 1 & 2 Uprate Project



### Projects Completed in 2002

- Unit 2 High Pressure Turbine Section
- Unit 2 Iso-Phase Bus Duct Cooling to Breakers
- Unit 2 Boiler Feed Pump Capacity Increase
- Unit 2 Additional Safety Valves
- Unit 2 High Pressure Heater Drain Line Modification

### Projects Completed in 2003

- Unit 1 High Pressure Turbine Section
- Unit 1 Iso-Phase Bus Duct Cooling to Transformers
- Unit 1 Boiler Feed Pump Capacity Increase
- Unit 1 Additional Safety Valves
- Unit 1 High Pressure Heater Drain Line Modification
- Unit 1 Over Fire Air System and Platen Extensions
- Unit 1 Transformer Cooling
- Unit 1 Generator Monitoring System
- Units 1 & 2 Helper Cooling Towers
- Cooling Tower Make-up Capacity Increase

### Projects Completed in 2004

- Unit 2 Transformer Cooling
- Unit 2 Iso-Phase Cooling from the Breakers to the Transformer
- Unit 2 Generator Monitoring
- Unit 2 Over Fire Air System and Platen Extensions

*Balanced Scorecard  
Summer 2004  
J. Hill*

**Internal Business Process**

**Objective:** Complete Unit 2 uprate

**Initiative:** Installation of all Unit 2 equipment required for complete uprates to 950MW gross.

**INSTALL ALL OF UNIT 2 EQUIPMENT REQUIRED COMPLETE UPRATES TO 950MW GROSS**

As of the end of the Unit 2 Spring 2004 Outage, all equipment is now in place and operational for maintaining a 950 MW gross rating on both Units 1 & 2. The Unit 2 modifications completed in recent months include:

- Overfire Air System
- Platen Superheater Extensions
- Helper Cooling Tower
- Circulating Water Pump Modifications
- Burner System Upgrade
- Boiler Spring-Actuated Safety Valve Addition
- Boiler Feed Pump Modifications/BFP Turbine Rerate
- High Pressure Turbine Section Upgrade (completed two years ago)
- High Pressure Heater Drain Piping Modifications
- Generator Stator Cooling Water O2 System (Stator Leak Reduction and Monitoring system)
- Scrubber Absorber Wall Ring Installation
- Main Transformer Cooling Enhancement
- Isophase Duct Cooling Enhancements

Unit 2 is currently operating comfortably at 950 MW gross and is currently operating in a stable manner within the design margins.

**Internal Business Process**

**Objective:** Minimize Impact of the Aging Plant.

**Initiative:** Implement the plan for improved pulverizer reliability and output capacity.

**MEMORANDUM**

**INTERMOUNTAIN POWER SERVICE CORPORATION**

**TO:** George W. Cross

**FROM:** Stan L. Smith

**DATE:** January 24, 2006

**SUBJECT:** Availability and Capacity Improvements on Unit 1 and 2 Pulverizers

The uprate of the units, coupled with the lower quality of coal available on the market, has resulted in an increased demand on the pulverizers. These demands have affected our current pulverizer availability and capacity. Improvements are needed to keep the unit availability and capacity at the high levels expected of our facility.

**Improve Pulverizer Availability**

Pulverizer availability improvements are currently being addressed by the following:

- Increase the annual maintenance budget for pulverizer repairs (from \$1M/yr in past years to \$2M/yr this year and thereafter).
- Repair and replace all eroded and damaged parts of the mills during each major overhaul.
- Rebuild the gearboxes during scheduled pulverizer overhauls at two to three gearboxes per year.
- Increase warehouse inventory of parts.
- Replace worn out stationary throats with B&W counterclockwise rotating throats during scheduled overhauls.
- Increase the size of loading ropes during the overhauls.
- Increase pulverizer maintenance during scheduled major unit outages (doing four overhauls each outage).
- Keep better, more detailed records of the pulverizer maintenance history.
- Improve the tooling for repairs. This includes a fork lift dedicated to pulverizer maintenance; air lines that are better marked and lined out; power and welding connections added next to the mills; stairs to the mills upgraded for ease of access; an I-beam and hoist fabricated that install to the wheel frame inside the mill during maintenance; more specialty tools purchased (for example, large air wrenches, hoists, slings, large sockets, etc.); and new inch drives, wheel braces, and frame lifts.